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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,470	07/25/2003	Jorg Kroker	5857	3226
7590	01/12/2005		EXAMINER	
			RONESI, VICKEY M	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/627,470	KROKER ET AL.	
	Examiner	Art Unit	
	Vickey Ronesi	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/25/03.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: Machine Translation of DE 19727540.

DETAILED ACTION

Specification

1. The disclosure is objected to because, in the title, “alkl” should read as “alkyl.”
Appropriate correction is required.
2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Present claim 3 recites an epoxide equivalent weight of about 165 to about 225 grams/equivalent, however, on page 6, line 10 of the present specification, support is given only for the range of 165 to 200 grams/equivalent.

Claim Objections

3. Claim 2 is objected to because on line 23 the term “wherein the” is repeated.
Claim 5 is objected to because “trimethyolpropane” should read as “trimethylolpropane.”
Claim 12 is objected to because on line 8 “an foundry” should be replaced with “a foundry.” Furthermore, in part (b), “the liquid state” should read as “a liquid state.”
Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 3 recites that the epoxy resin has an epoxide equivalent weight of about 165 to about 225 grams per equivalent, however, the present specification on page 6, line 10 recites an average weight per epoxy group of 165 to 200 grams/equivalent.

5. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "an effective amount of a peroxide" in claim 1 is a relative term which renders the claim indefinite. The term "an effective amount" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 1 is indefinite due to the term "will cure" which should be replaced with "cures." It is not understood how one can claim something which does not yet exist but which is obtainable through some future step or means.

Claim 12 recites the limitation "said metal" in line 9. There is insufficient antecedent basis for this limitation in the claim. It is noted that there is only antecedent basis for a metal article, not metal *per se*.

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Claim 12 recites the limitation "the molded article" in line 11. There is insufficient antecedent basis for this limitation in the claim. It is suggested that the phrase "to form a molded article" be added to the end of line 10 after the word "solidify."

Claims 2-11 and 13 are rejected for being dependent on a rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Woodson et al

'567 (US 6,604,567)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Woodson et al '567 discloses a foundry binder system and processes that read on the present claims (col. 4, lines 28-42; col. 12, line 26 to col. 14, line 9). Although not claimed by Woodson et al '567, its composition also includes 0-25 wt % of a solvent such as butyl tallate. It is further noted that the present use of open claim language "comprising" allows for the addition of other ingredients utilized by Woodson et al such as an alkyl silicate.

In light of the above, it is clear that Woodson et al '567 anticipates the present invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodson '576 (US 4,806,576, cited on IDS dated 7/25/2003) in view of Garbsch et al (DE 19727540, cited on IDS dated 7/25/2003).

Pending a full English-language translation of Barbsch et al, in setting forth this rejection, a machine translation has been relied upon.

Woodson '576 discloses a curable epoxy resin composition (col. 18, lines 4-66) used in foundry-making (col. 19, line 42 to col. 20, line 42) comprising a major amount of foundry aggregate (col. 7, lines 14-24) and a binder comprising 30-50 wt % of an epoxy resin such as that derived from bisphenol A and having an epoxide equivalent of about 175-210 (col. 5, line 5); up to 50 wt % (col. 7, line 10) of a trifunctional acrylate such as trimethylolpropane

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triacrylate (col. 6, lines 57-58); and 15-40 wt % of a peroxide such as cumene hydroperoxide (col. 5, line 58 to col. 6, line 11) that is cured in the presence of sulfur dioxide.

Woodson '576 is silent with respect to the addition of a fatty acid alkyl ester, nevertheless, it is open to the use of other materials that provide additional desirable results (col. 7, lines 25-26).

Garbsch et al discloses foundry binder compositions comprising epoxy resins modified by acrylate monomers (paragraph 14) and teaches that when up to 30 wt % (based on the weight of the binder composition) of a methyl-, ethyl, or propyl- ester of oleic acid added to the binder composition, improved properties such as those disclosed in paragraphs 10-12 are observed.

It is noted that although Garbsch et al does not disclose the presently claimed alkyl groups (i.e., alkyl groups with 4-8 carbon atoms), it is the examiner's position that it would have been obvious to one of ordinary skill in the art to expect similar beneficial results with compounds having only additional $-\text{CH}_2-$ groups. Case law holds that homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by $-\text{CH}_2-$ groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. *In re Wilder*, 563 F.2d 457, 195 USPQ 426 (CCPA 1977).

Given that Woodson '576 is open to the addition of other ingredients which provide desirable results to its foundry binder system and given that Garbsch et al, which is in the same field of endeavor as Woodson '576, teaches that fatty acid alkyl esters impart beneficial properties to a binder system, it would have been obvious to one of ordinary skill in the art to

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utilize the fatty acid ester as taught by Garbsch et al or an obvious variant thereof in the foundry binder system of Woodson '576 and thereby arrive at the presently cited claims.

8. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodson '576 (US 4,806,576, cited on IDS dated 7/25/2003) in view of Garbsch et al (DE 19727540, cited on IDS dated 7/25/2003) and further in view of *Hawley's Condensed Chemical Dictionary* ("oleic acid").

The discussion set forth in paragraph 7 above with respect to Woodson '576 and Garbsch et al is incorporated here by reference.

Neither Woodson '576 nor Garbsch et al does not discloses the use of butyl tallate its foundry binder compositions, however, Garbsch et al discloses the use of an alkyl ester of oleic acid.

Hawley's teaches that oleic acid is a component of tall oil.

Given that the use of an oleic acid alkyl ester is disclosed by Garbsch et al and given that it is known that oleic acid is a component of tall oil as taught by *Hawley's*, it would have been obvious to one of ordinary skill in the art to utilize an alkyl ester of tall oil which comprises oleic acid and thereby arrive at the presently cited claims.

9. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodson '576 (US 4,806,576, cited on IDS dated 7/25/2003) in view of Garbsch et al (DE 19727540, cited on IDS dated 7/25/2003) and further in view of *Hawley's Condensed Chemical Dictionary* ("oleic acid" and "casting").

The discussions set forth in paragraphs 7 and 8 above with respect to Woodson '576, Garbsch et al, and *Hawley's Condensed Chemical Dictionary* ("oleic acid") is incorporated here by reference.

Although Garbsch et al discloses using its foundry binder composition to form a foundry shape (col. 19, line 42 to col. 20, line 42), it does not disclose a method of using the foundry shape itself to cast metal.

Hawley's teaches that molten metal is formed into bars or products by pouring the liquid metal into open troughs or channels made of foundry sand (sand casting). It would have then been well within the capabilities of one of ordinary skill in the art to cool the metal before separating the cast metal article from the foundry shape.

Given that the composition of Woodson '576 is intended for use in a foundry binder, it would have been obvious to one of ordinary skill in the art to use the foundry shape to cast metal as taught by *Hawley's* and thereby arrive at the presently cited claims.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,604,567. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons given below.

US '567, like the present claims, discloses a foundry binder system comprising epoxy resin, acrylate, and peroxide. Although US '567 does not explicitly claim the use of an alkyl ester of a fatty acid, such is clearly within the scope of US '567's claims given the open claim language "comprising." In passing, it is noted that the specification refers to the addition of an alkyl ester of a fatty acid such as that presently claimed at col. 4, lines 28-50.

11. Claims 1-13 are directed to an invention not patentably distinct from claims 1-15 of commonly assigned U.S. Patent No. 6,604,567. Specifically, see the discussion set forth in paragraph 10 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned U.S. Patent No. 6,604,567, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

12. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,604,567. See the discussion set forth in paragraph 10 above.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Correspondence

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 6, 2005

vr



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